



WELCOME

IZWTAG Conference
April 27th, 2023

CONTAMINATION

Developing Best Practices for Solving Contamination Issues



RECYCLEBCTM

APRIL 27TH

PRESENTED BY

TIM AMES – SPECIAL PROJECTS
MANAGER – RECYCLE BC

Land Acknowledgement

- *I am a grateful guest living, visiting, working and moving freely on the *unceded, ancestral, and traditional territories of the Coast Salish (Musqueam, Squamish, Tsleil-Waututh, Tsawwassen) peoples whose historical relationships with the land continue to this day.*

We express our sincere gratitude to be welcomed on these lands.

**Unceded means this land was never surrendered, relinquished, or handed over in any way.*

Presentation Agenda

- Program Results 30 min
 - Definitions
 - What we are doing right
 - Examples of Contamination
 - Data and Learnings

- Brainstorm Exercise 15 min
 - How do you solve a problem like contamination?

- Q&A & Wrap up 15 min



PROGRAM RESULTS

2021 Recycling Data

MAKING A DIFFERENCE TOGETHER

Getting from Good to Great.

Access



- 197,745 Tonnes of Materials Managed by Recycling
- 86% of Tonnes Managed by Recycling
- 11,821 Tonnes of materials managed by recovery (Engineered fuels
- 18,288 Tonnes of collected materials managed by disposal

DEFINITIONS

Non-Targeted Material Includes:

- Non-Packaging and Printed Paper (Non-PPP)
- Unsortable Material
- Contaminated PPP
- Comingled Glass
- Flexible Plastics
- Foam Packaging

Contamination Rate refers to:

- Non-Packaging and Printed Paper (Non-PPP) is any material that is not In-Scope PPP





NON-TARGETED MATERIAL

Hazardous and Non-Hazardous

Recycling can be HARD

Education and Innovation help



PROPANE EXPLOSIONS



CHILLIWACK RECYCLING PLANT - AUG 2016



<http://www.theprogress.com/news/slideshow-fire-rips-through-chilliwack-recycling-plant/>



CUMBERLAND TRUCK FIRE - NOV 2017



THE PROBLEM OF FOAM



THE PROBLEM OF PLASTIC FILM



Cariboo RD



REJECTING LOADS?



What Contamination ?



More Subtle Contamination



CHINA'S NATIONAL SWORD 2017





DATA AND KNOWLEDGE

The Recycle BC Program: A System built with Intention

- **Recycle BC:** An integrated system of steward engagement, collection, post collection processing and end market validation.

Best Possible Environmental Outcomes

Collection

Accessibility

- Convenience
- Program Expansion
- Bulk Drop Program*

Targets

- Adding more materials
- Increased recovery rates

Innovation

- GHG Reduction
- New Collection Models
- Contamination Reduction

○ *First Nations only program



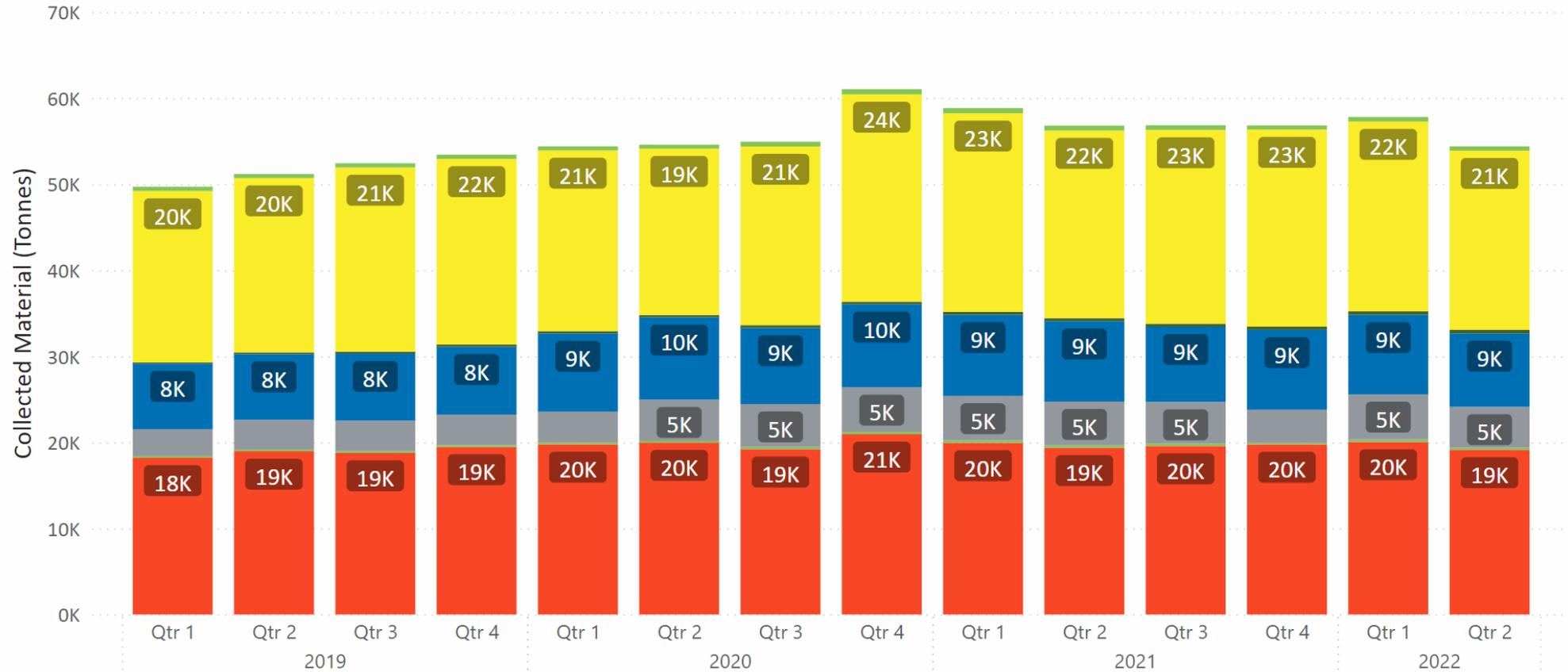
Recycling / Auditing / Actions – First Nations

- Recycle BC targets a 3% contamination threshold for our curbside programs
- Every month through a lottery process we select and audit our largest partners
- If a partner is continuously significantly above the maximum, we meet and set up a remediation plan.
- The partner will need to reduce their contamination by 25% over a 12-month period
- As time goes on, we will look at smaller and smaller partners to audit which will include First Nations partners
- Recycle BC will always do our part and best to work with our partners, with service level failure credits being a last resort.... And that won't be a surprise.

Materials by Volume



COLLECTED MATERIAL BY WEIGHT



Recycling vs Curbside Recycling

- Diversion vs Convenience



Future of Collection: Continuous Improvements

○ Increasing Trend for Automation

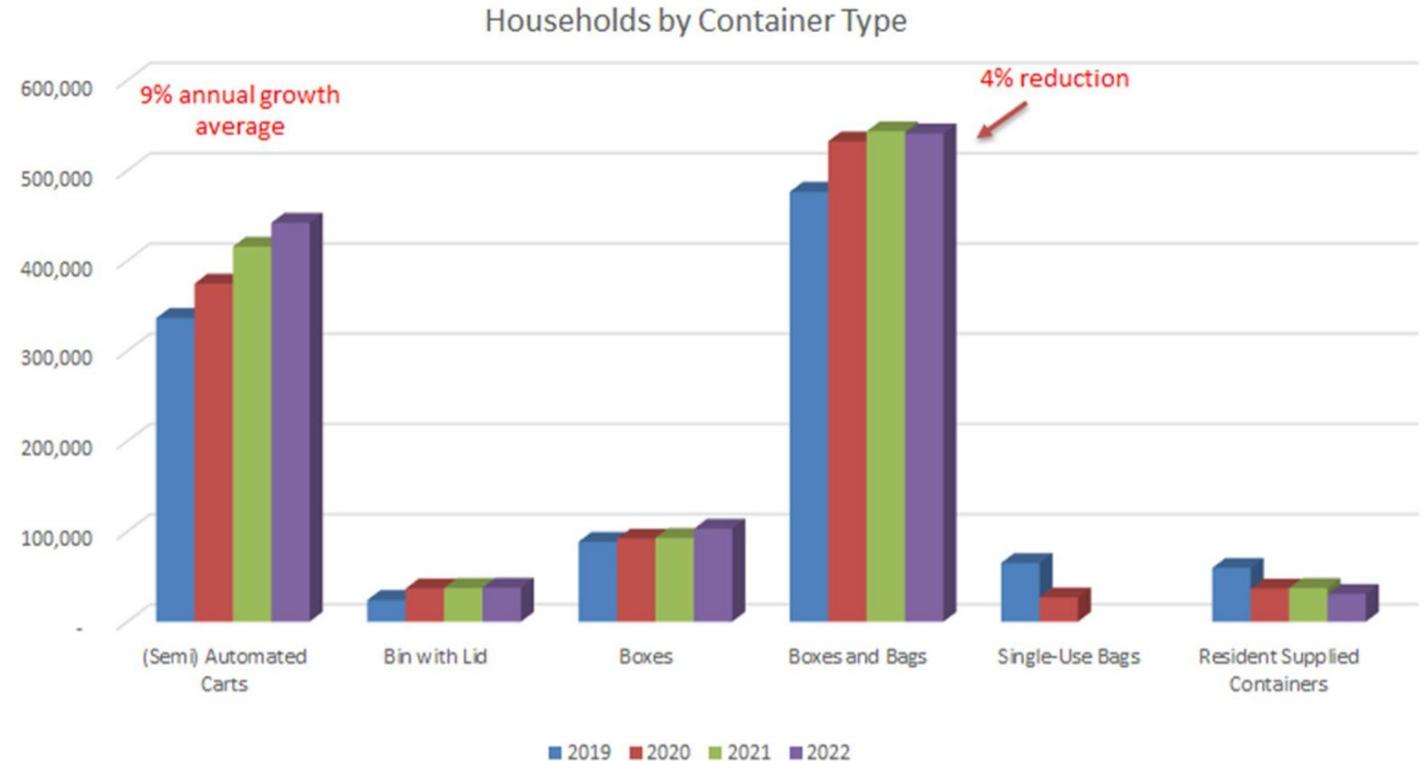
- ♻️ 9% annual average
- 📦 Focus on collection optimization

○ Contamination Reduction focus:

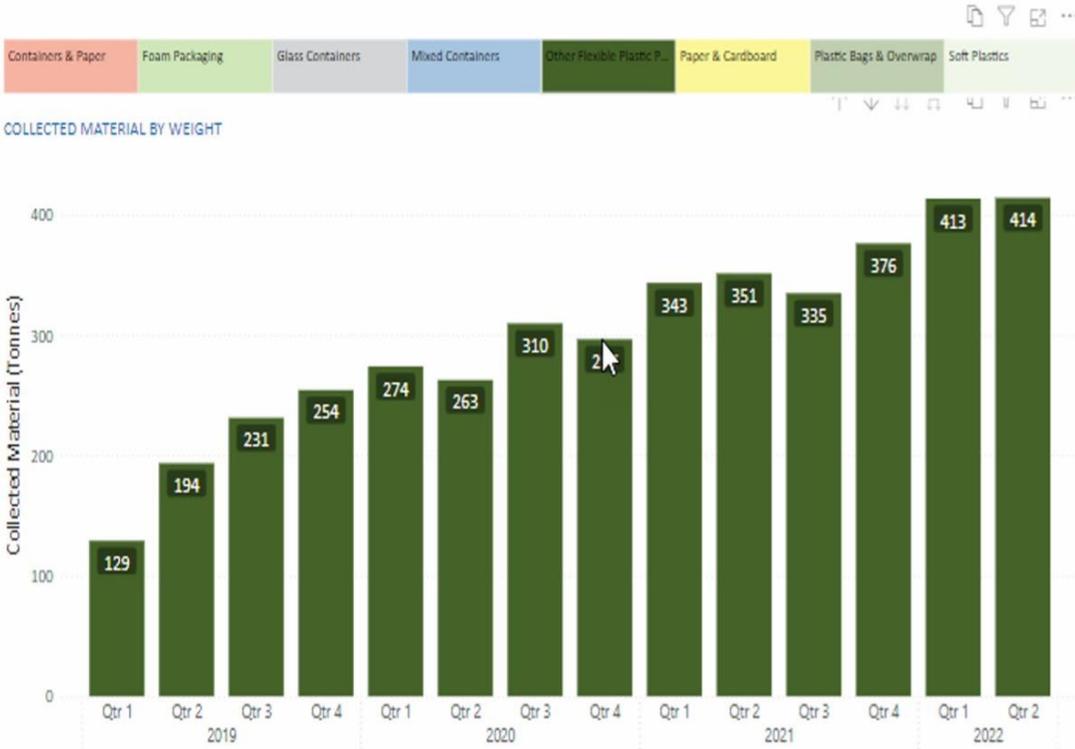
- Improve material Quality
- Increase access to onshore End Markets
- Increase recovery

○ Program commitments for reduction in overall GHG:

- ♻️ Decarbonization
- Electrification



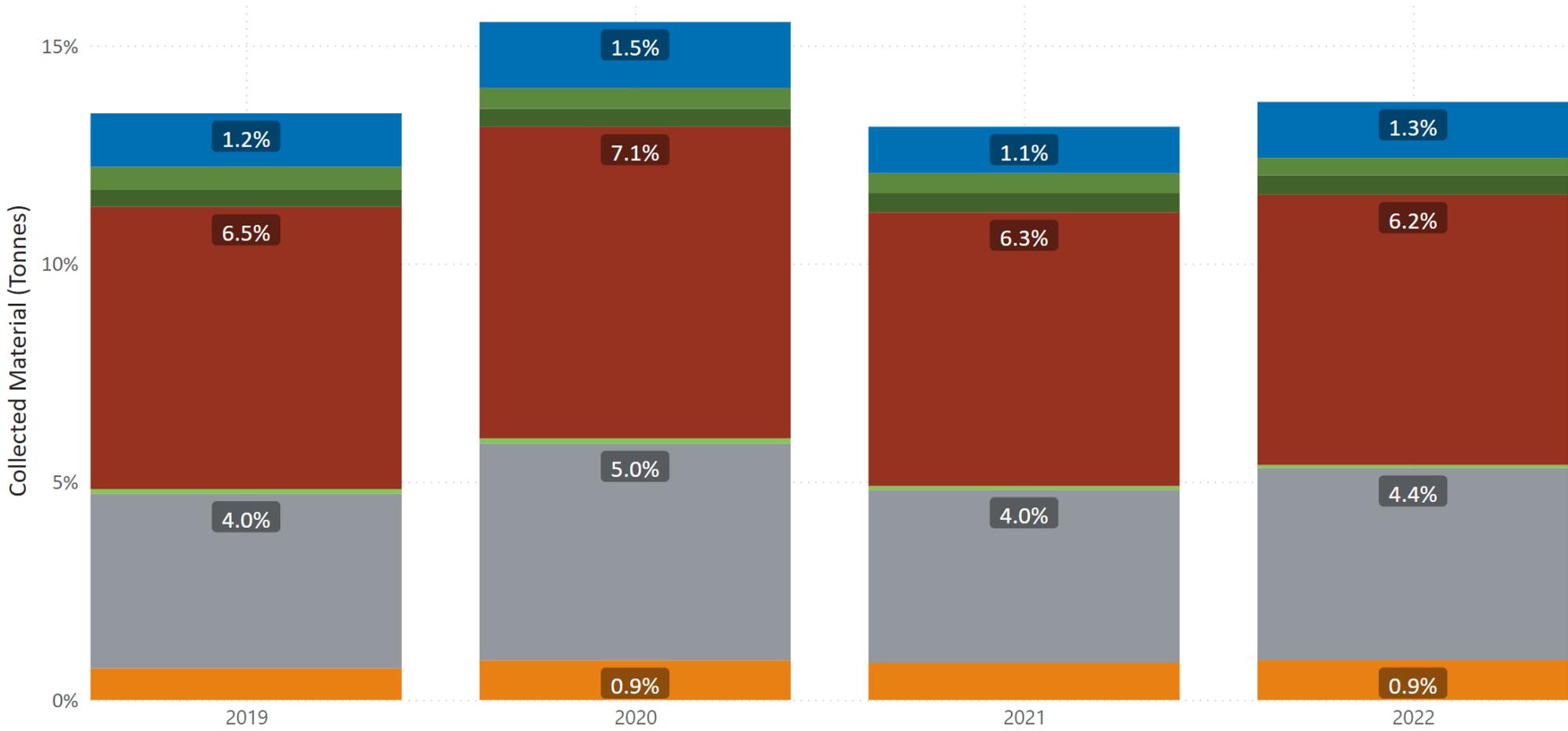
Material Volume: Soft Plastics



Non-Targeted Material Composition Rates



COLLECTED MATERIAL BY WEIGHT



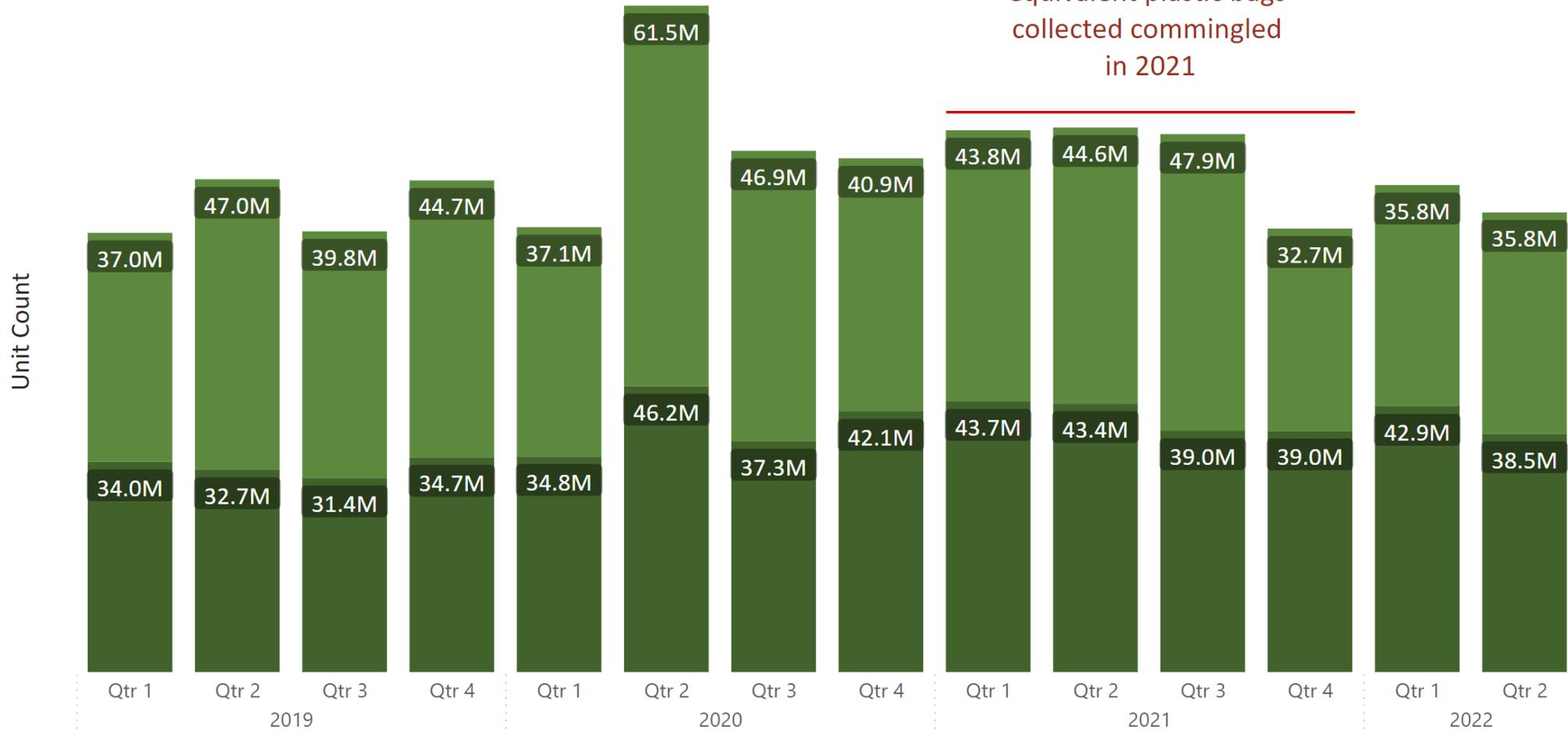
Commingled Soft Plastics – Equivalent Units

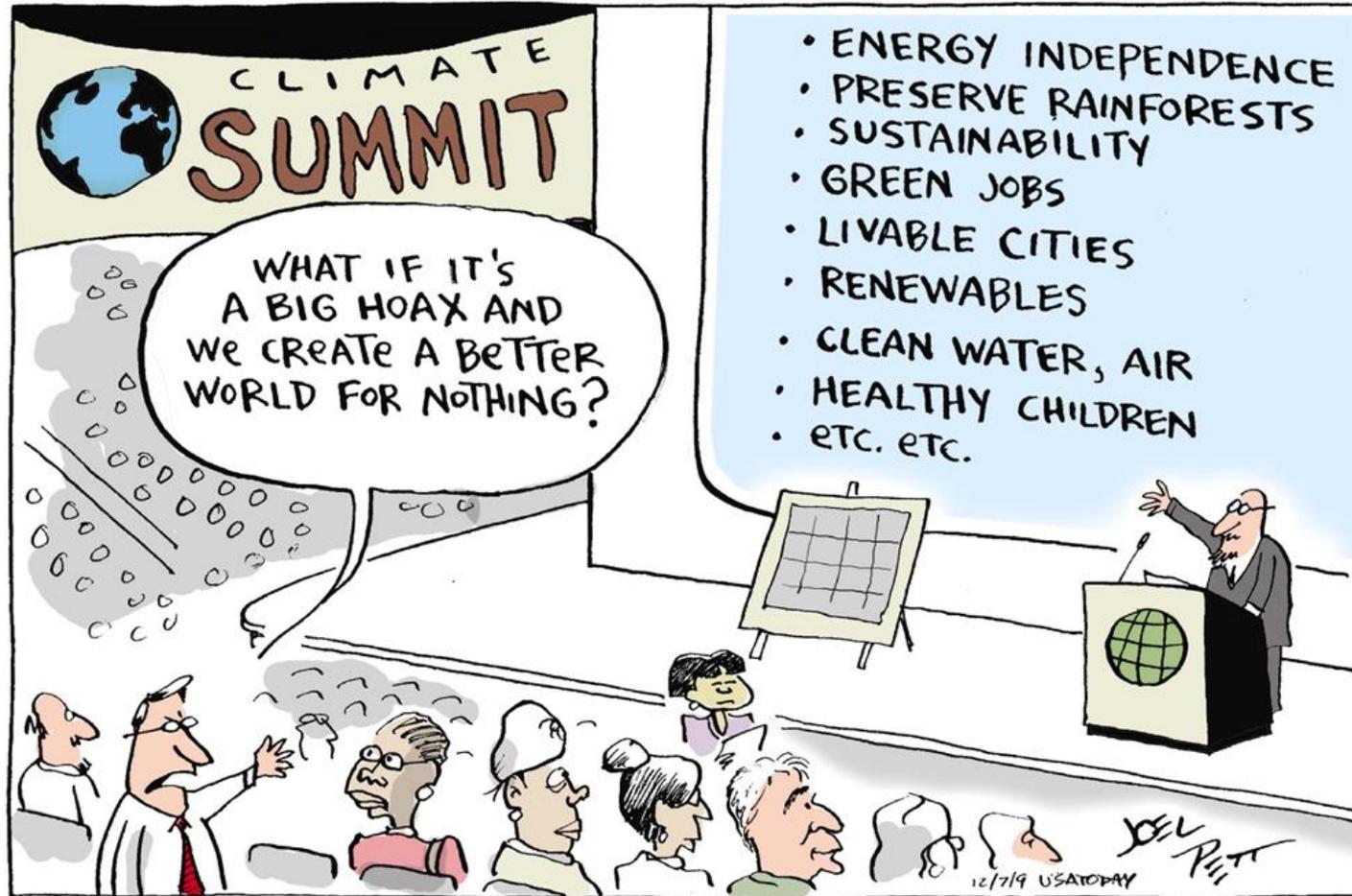
Other Flexible Plastic Packaging

Plastic Bags and Overwrap

COLLECTED SOFT PLASTICS BY UNIT COUNT

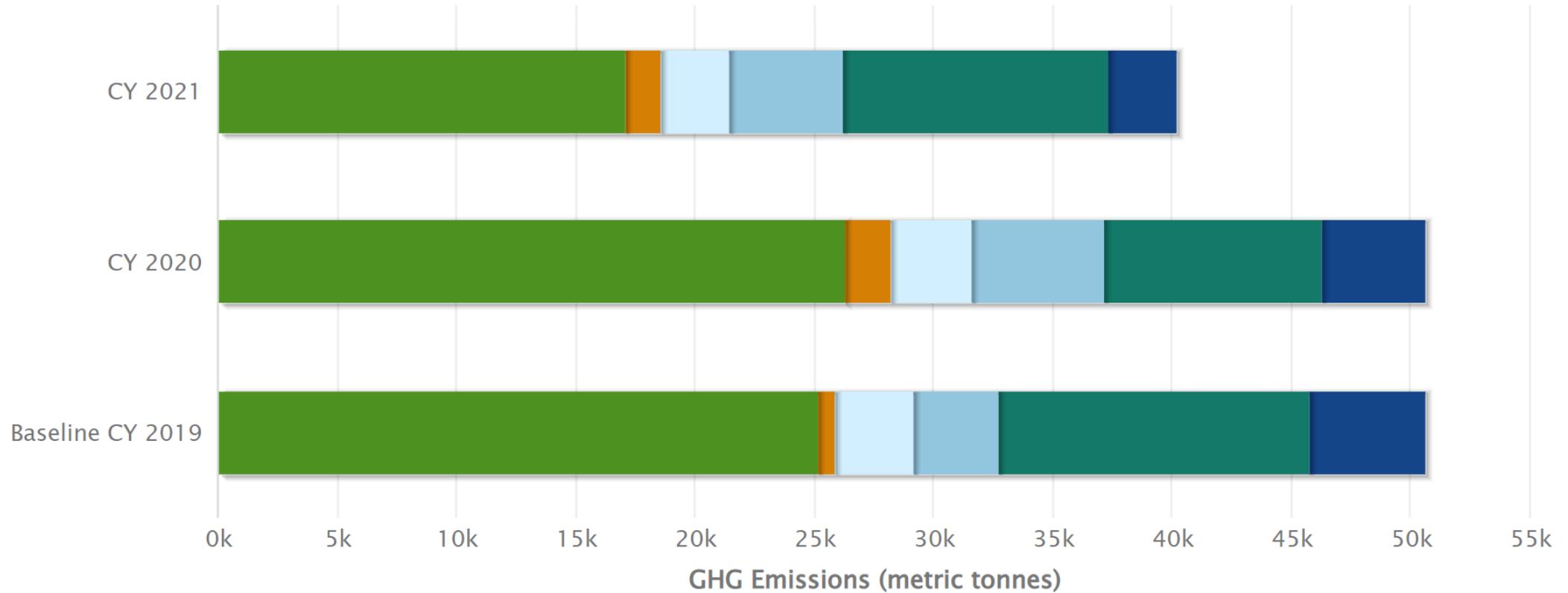
Over **330 million** equivalent plastic bags collected commingled in 2021





Program GHG Reporting : Continuous Improvements

GHG Emissions by Location (metric tonnes)



ACTIVITY - REDUCING CONTAMINATION

- What actions can be taken by stakeholders to reduce contamination?
 - Example:

ACTION	STAKEHOLDER RESPONSIBLE	BENEFIT OF ACTION	APPLICABILITY (CURB, MF, DEPOT)	SPECIAL CONSIDERATIONS	RANK
 Tag & leave bins	Collector	Educating resident directly by making them deal with contamination	Curb, MF	Tagged MF bins are dealt with by building superintendent, not resident	1



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